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June 1965

PHOTOGRAPHIC INTERPRETATION REPORT

# SELECTED RADAR TRACKING FACILITIES, KY/VMTC AND GULF OF FINLAND AREAS, USSR

Declass Review by NIMA/DOD



CIA



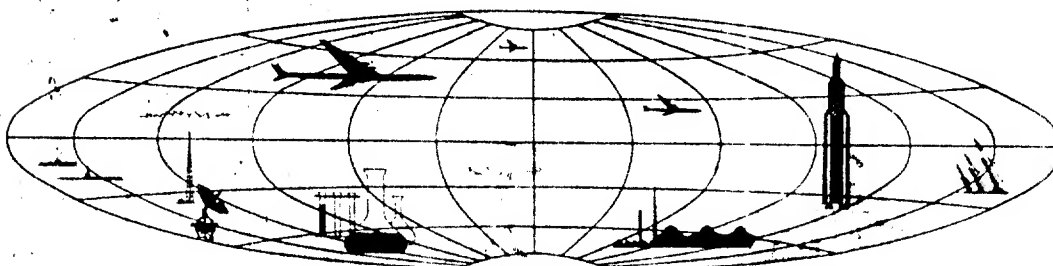
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PHOTOGRAPHIC INTERPRETATION REPORT

# SELECTED RADAR TRACKING FACILITIES, KY/VMTC AND GULF OF FINLAND AREAS, USSR

June 1965

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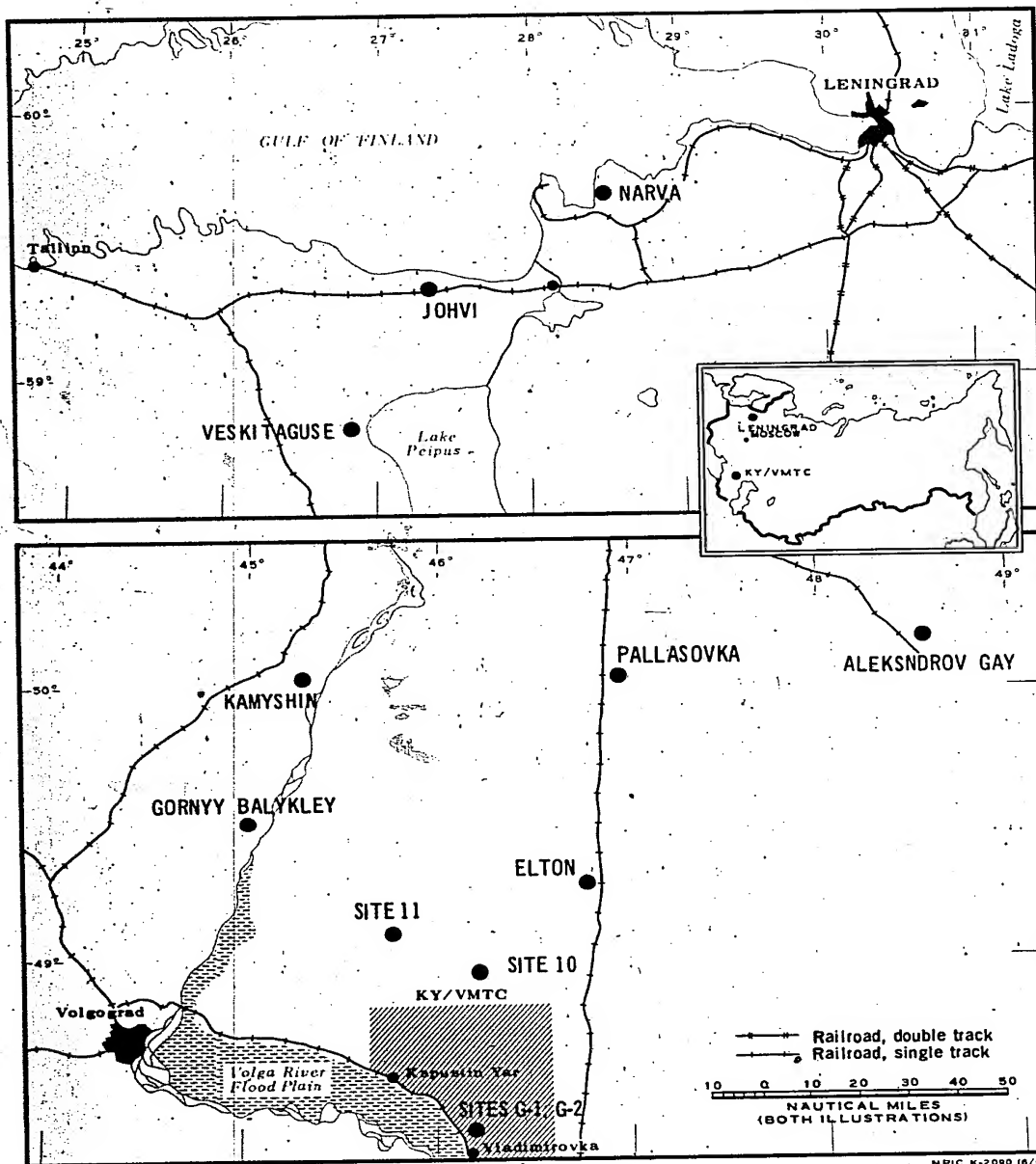


FIGURE 1. LOCATION MAP.

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### INTRODUCTION

Twelve radar tracking facilities, all previously referred to as H-shaped facilities,\* have been noted on KEYHOLE photography of the USSR (Figure 1).\*\* Nine of these facilities apparently serve as extended-range tracking for the Kapustin Yar/Vladimirovka Missile Test Center (KY/VMTC), as suggested by their location and equipment, while the other 3, in the Gulf of Finland area, are possibly a deployed version of these facilities.

Photographic analysis has failed to reveal any evidence associating these facilities with a specific missile system. The types of radar present, where identifiable, indicate an acquisition and tracking capability only against targets within the earth's atmosphere.

The present study consists primarily of a detailed photographic analysis of each of these 12 facilities. However, it also attempts to compare the facilities in 3 significant categories: location, configuration, and relative age. In addition, although the available photographic coverage is limited, an attempt has been made to describe and correlate the antennas and other equipment present at the various facilities.

### COMPARISON OF FACILITIES

#### By Location

Generally, the facilities are located in 2 areas of the USSR. Nine of them are in the KY/VMTC area (Figure 1, bottom) and vary in distance from approximately 20 to 135 nautical miles (nm) from the surface-to-air missile (SAM) launch areas of the rangehead, and their overall siting provides good radar coverage of the area generally north and northeast of the rangehead. The remaining 3 facilities

\*In NPIC/R-322/64, May 64, 1/ and various cables and immediate reports.

\*\*See Addendum.

ities (Figure 1, top) are situated generally west of Leningrad and south of the Gulf of Finland, their individual locations forming a flat-triangle configuration with the apex of the triangle oriented generally northwest.

#### By Relative Age

Another way in which a facility comparison can be made is by the method of age relationship, although available photographic coverage offers some limitations.

For example, neither Site 10 nor Site 11 can be definitely negated on KEYHOLE photography. However, Site 11 is present and apparently being expanded on photography of [REDACTED] while Site 10 appears to be complete as of the same mission. Photography from an earlier mission [REDACTED] is of such poor quality that it cannot be definitely determined whether there is activity at the locations of these facilities or not.

The G-2 facility, a conventional H type, can be negated in [REDACTED] and was first seen--in an advanced stage of construction--in [REDACTED]

The Kamyshin facility can be negated in [REDACTED] and appears to be under very early construction in [REDACTED]. Its counterpart, Aleksandrov Gay, cannot be negated on KEYHOLE photography, but this may be misleading since the earliest coverage was in [REDACTED] when the facility was seen in a very early stage of construction.

The 4 remaining facilities in the KY/VMTC area can be negated on photography of [REDACTED]. Three of these, Elton, Gornyy Balykley, and Pallasovka, are of the conventional H configuration, while the fourth is the G-1 facility of a somewhat different configuration. The first indication of construc-

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As a result, at many of the facilities it cannot be determined whether radar positions are occupied or not, much less the actual type of equipment present. A few sites, however, notably Kamyshin and G-1, have been covered

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By correlation, it seems likely that similar types of antennas would be used at sites of similar configuration, although this assumption cannot be confirmed by available photography.

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The radar antennas at Kamyshin, which was covered by [REDACTED] were determined to be probable BACK NET range-and-azimuth radars and possible SIDE NET height-finder radars. These de-

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TYPE: Conventional H  
LOCATION: KY/VNMC

#### INSTRUMENTATION SITE G-2

(See Figure 3)

Coordinates: 48-24-15N 46-14-10E

Orientation: 335°

Mounds/Radars: 4 mounds (items 1-4) appear unoccupied, and no radars are visible within the site

Instrumentation/Communications Positions: 2 unoccupied hardstands (items 5 and 6) in western end of site, with probable control position between them

Control Buildings/Revetments: No revetments, but 1 large and 1 small bunkered control building are situated between the mounds;

At Site G-1, the only other facility at which radar antennas could be identified by type, the radars identified on [REDACTED]

[REDACTED] were a probable BAR LOCK and a height finder (probably STONE CAKE), together with an additional radar of unidentified type. These radars are older types than those noted at Kamyshin, and are typical of the equipment found at most air-warning radar facilities.

No other antennas, either radar or communications, could be identified by type at any of the facilities although additional antennas are present. All antennas, probable or possible, are mentioned in the detailed descriptions of each facility, which follow.

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there is also an additional control/support building at the center of the facility  
Support Area: Undetermined

Map: DIA. USATC, Series 200, Sheet 0235-22HL, 4th ed, May 63 (S)

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TYPE: Conventional H  
LOCATION: KY/VMTC Area

**ELTON RADAR TRACKING FACILITY**  
(See Figure 4)

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Coordinates: 49-15-40N 46-48-20E

Orientation: [REDACTED]

Mounds/Radars: 4 mounds (items 1-4) appear unoccupied, and no radars are visible within the facility

Instrumentation/Communications Positions: 2 unoccupied hardstands (items 5 and 6) with a small probable control building between them

Control Buildings/Revetments: No revetments, but 1 large and 1 small bunkered control building are situated between the mounds

Support Area: Secured area with 12 buildings situated 4,000 feet east.

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Map: DIA. USATC, Series 200, Sheet 0235-18HL, 2d ed, Jan 63 (S)

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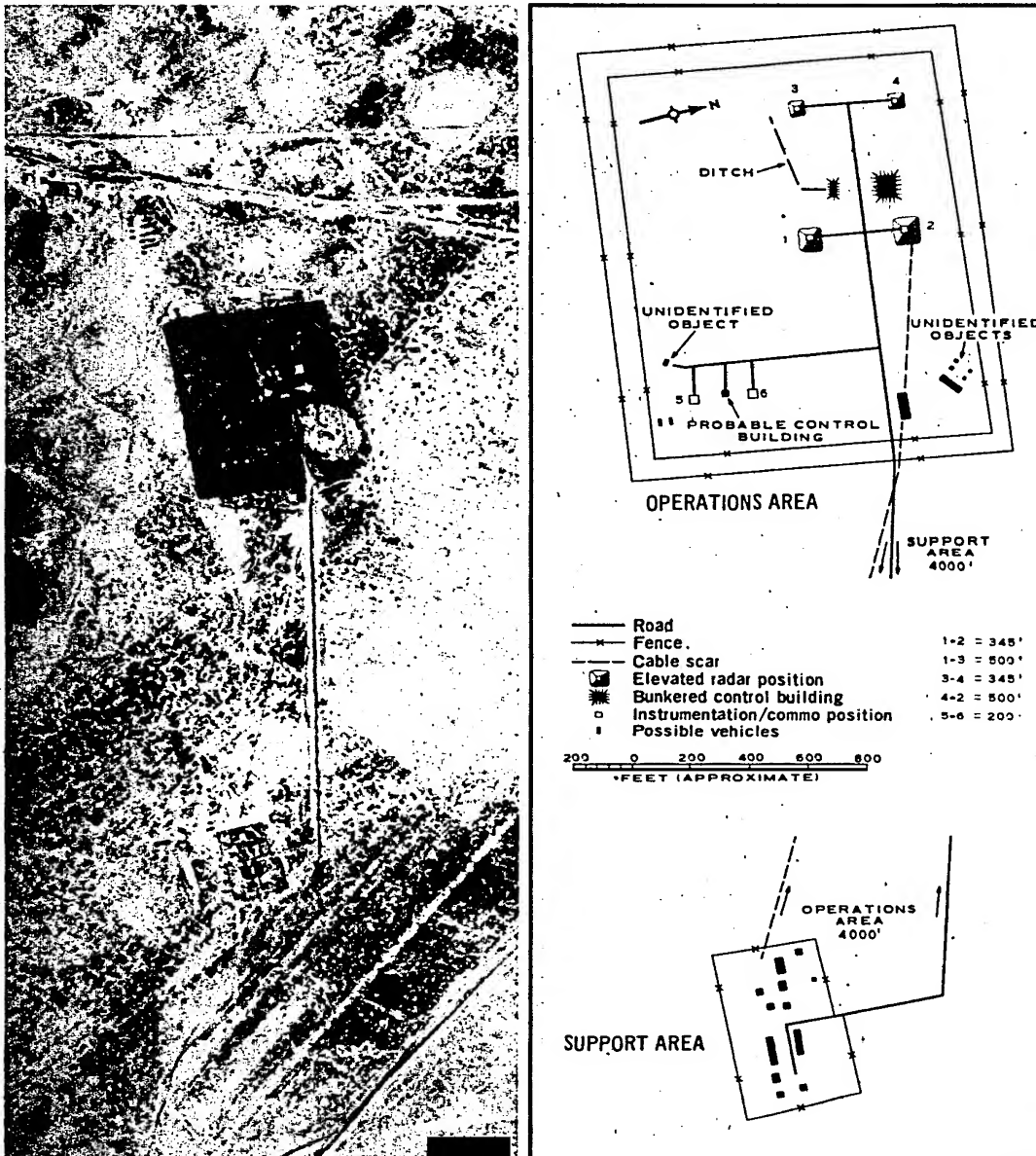


FIGURE 4. ELTON RADAR TRACKING FACILITY.

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TYPE: Conventional H  
LOCATION: KY/VMTC Area

**GORNY BALKLEY RADAR TRACKING FACILITY**

(See Figure 5)

25X1D

Coordinates: 49-33-30N 45-02-00E

Orientation: [REDACTED]

Mounds/Radars: 4 mounds (items 1-4), the first 3 of which are occupied by radars of unidentified type

Instrumentation/Communications Positions: 2 of 3 positions (items 5 and 6) appear occupied

Control Buildings/Revetments: 2 C-shaped revetments between mounds 1 and 2 appear occupied by probable vehicles/vans; no control buildings could be identified

Support Area: An unsecured area of at least 13 buildings is 2,000 feet to the northeast

Negation: Mission [REDACTED]

First Observed: [REDACTED]  
with indications of activity in support area only

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25X1D

Map: DIA. USATC, Series 200, Sheet 0235-17HL, 3d ed, Apr 64 (S)

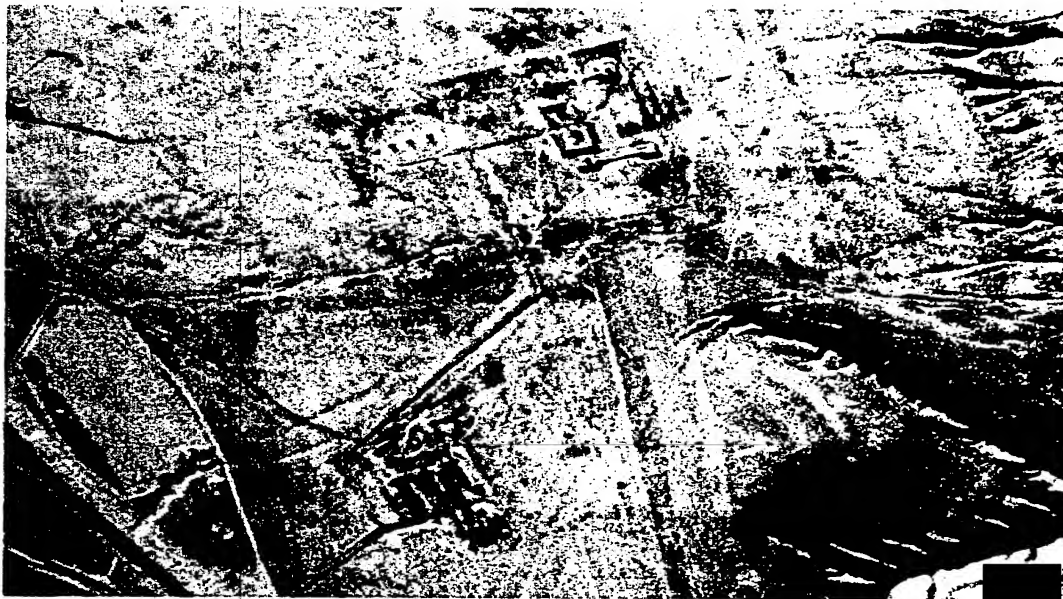
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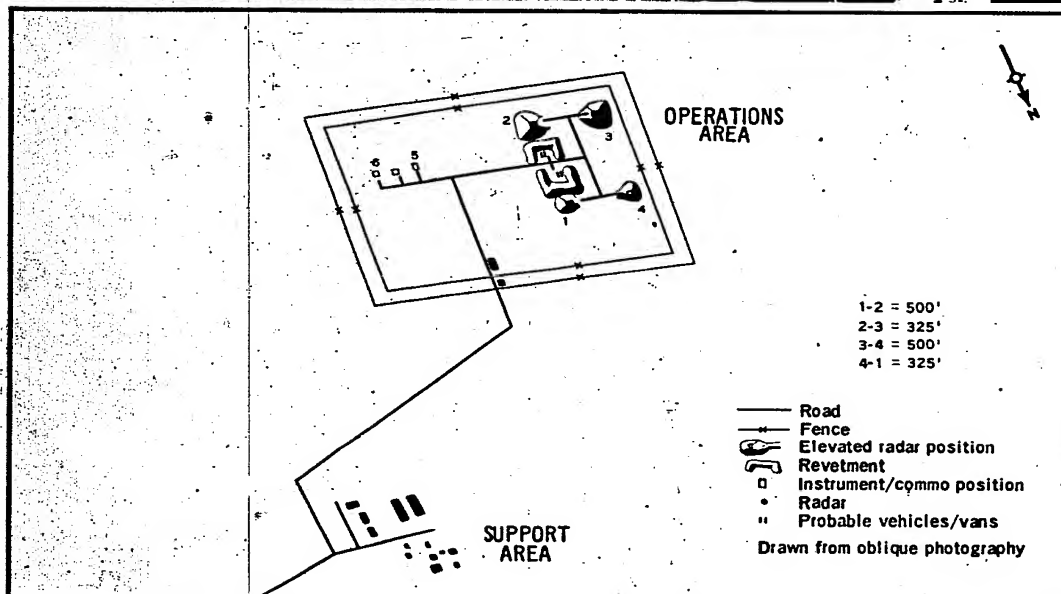


FIGURE 5. GORNYY BALYKLEY RADAR TRACKING FACILITY.

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TYPE: Conventional H  
LOCATION: KY/VNMC Area

**PALLASOVKA RADAR TRACKING FACILITY**  
(See Figure 6)

Coordinates: 50-04-00N 46-54-00E

Orientation: 360°

Mounds/Radars: 4 mounds (items 1-4) appear  
unoccupied, and no radars are visible within  
the facility

Instrumentation/Communications Positions:

None identified

Control Buildings/Revetments: 2 C-shaped  
revetments contain 4 rows of vehicles/vans;  
no control buildings could be identified

Support Area: A possible cable scar leads  
5,000 feet southwest to an unsecured area  
containing at least 13 buildings

Negation: Mission

First Observed:

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Map: USAF. USATC, Series 200, Sheet 0235-  
13AL, 1st ed, Jul 60 (S)

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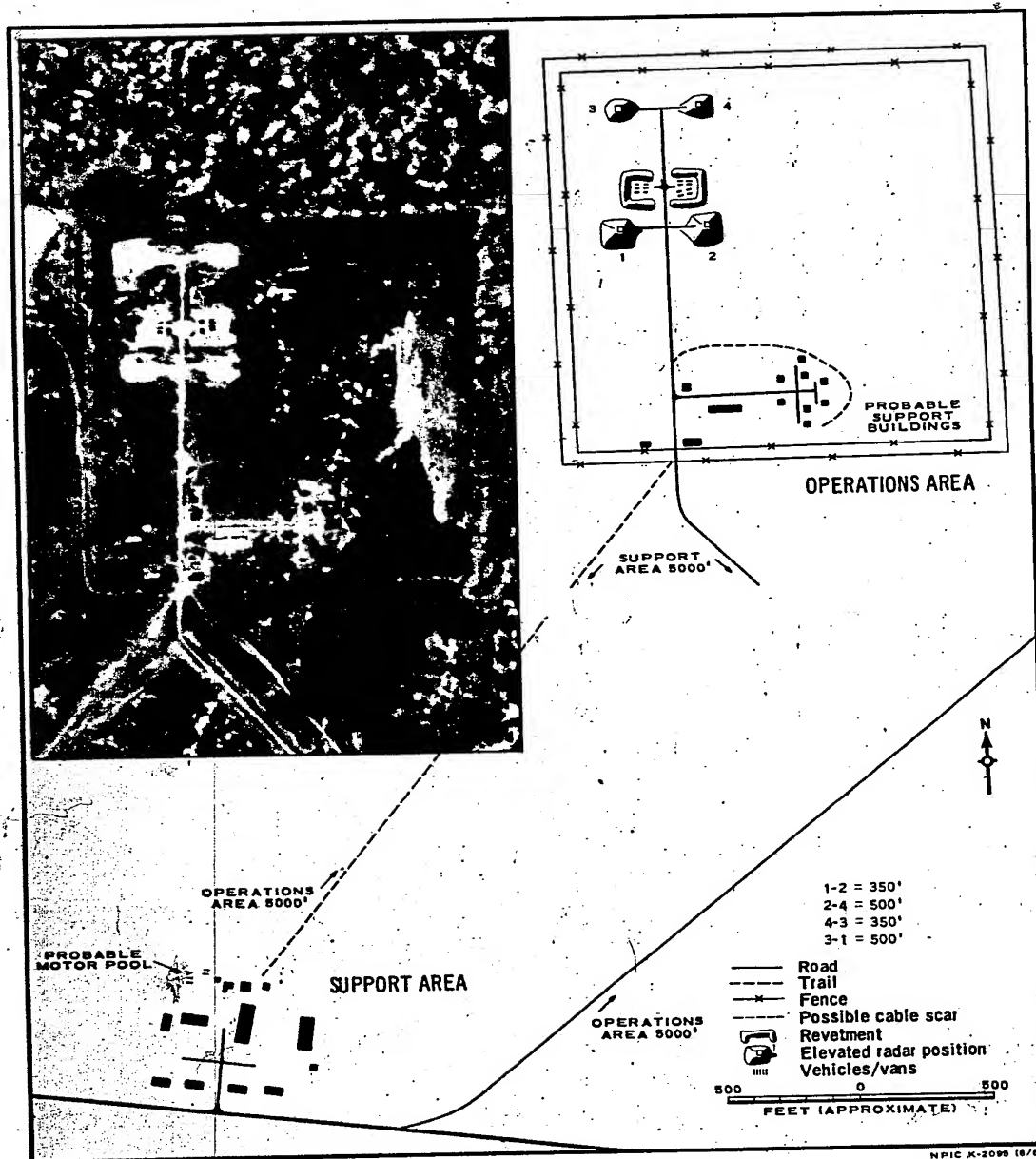


FIGURE 6: PALLASOVKA RADAR TRACKING FACILITY.

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TYPE: Conventional H (partial; towers)  
LOCATION: Gulf of Finland Area

**NARVA RADAR TRACKING FACILITY**

(See Figure 7)

Coordinates: 59-43-30N 28-29-00E

Orientation: 125/315°

Towers/Radars: 2 towers (items 1 and 2)  
are apparently occupied but radar type  
remains undetermined because of small-  
scale photography

Instrumentation/Communications Positions:

None identified.

Control Buildings/Revetments: 2 C-shaped  
revetments contain probable vehicles/vans;  
no control buildings could be identified

Support Area: A small unsecured area 2,000  
feet west-northwest contains at least 3  
buildings, 3 unidentified objects, and sev-  
eral probable vehicles/vans

25X1D

Map: DLA, USATC, Series 200, Sheet 0153-  
4HL, 2d ed, May 63 (S)

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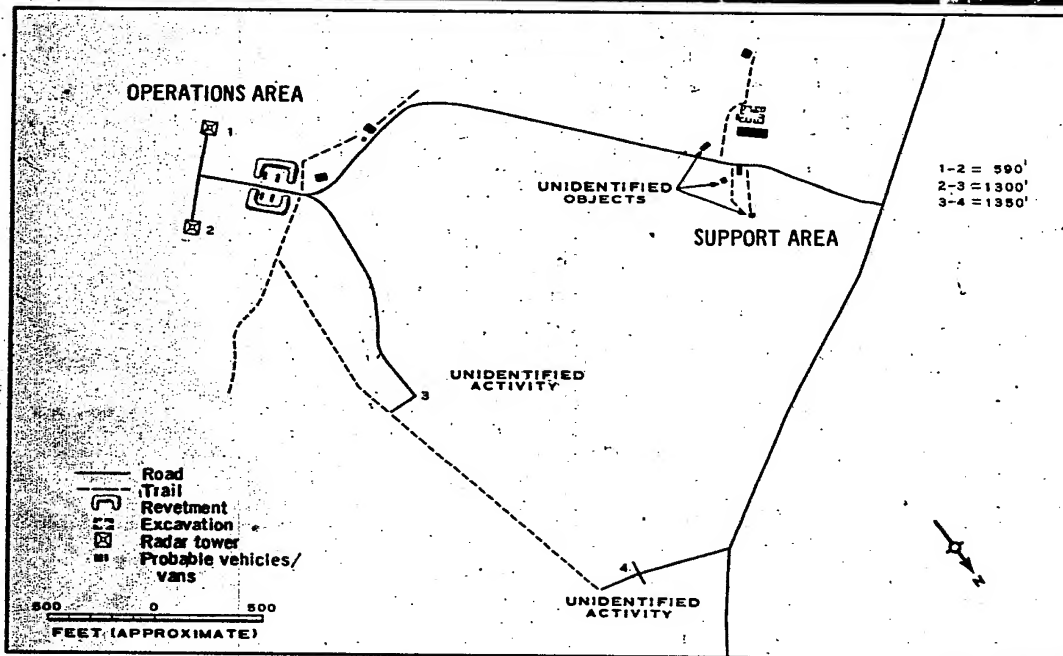
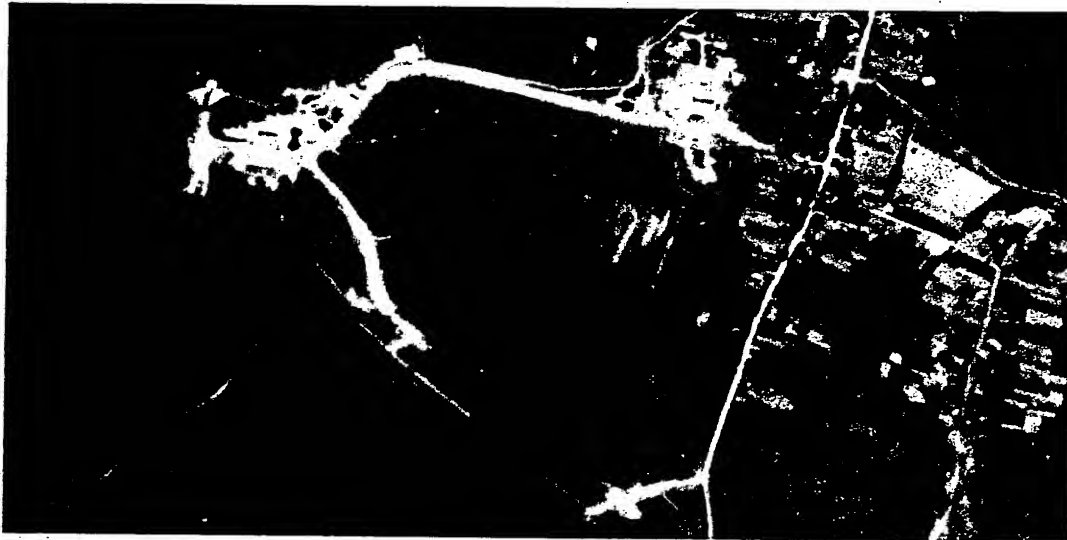


FIGURE 7. NARVA RADAR TRACKING FACILITY.

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*TYPE: Conventional H (towers)*  
*LOCATION: Gulf of Finland Area*

**JOHVI RADAR TRACKING FACILITY**

(See Figure 8)

Coordinates: 59-22-00N 27-21-00E

Orientation: 

Towers/Radars: 2 radar towers (items 1 and 2) and 2 probable radar positions (items 3 and 4) are visible, but it cannot be determined what radars, if any, are present


Instrumentation/Communications Positions:

None identified

Control Buildings/Revetments: 2 C-shaped revetments contain vehicles, but no control buildings are present

Support Area: A partially secured area 1,700 feet southwest contains approximately 5 buildings

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25X1D 

Map: DIA. USATC, Series 200, Sheet 0153-4HL, 2d ed, May 63 (S)

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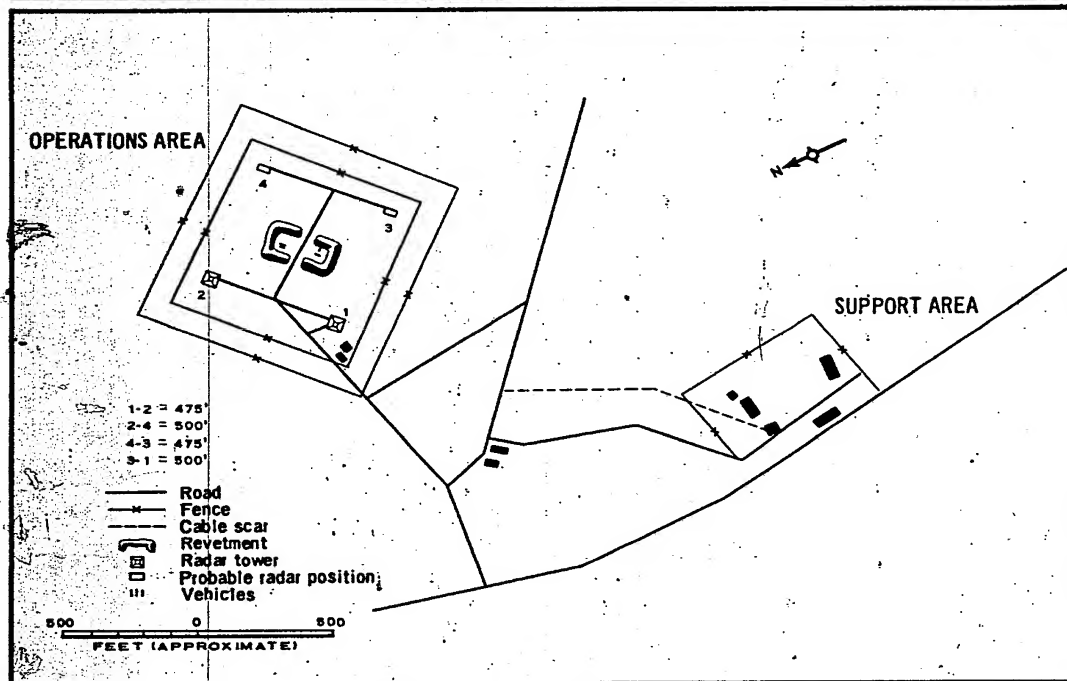


FIGURE 8. JOHVI RADAR TRACKING FACILITY.

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TYPE: Conventional-H (towers)  
LOCATION: Gulf of Finland Area

**VESKITAGUSE RADAR TRACKING FACILITY**

(See Figure 9)

Coordinates: 58-50-00N 26-47-30E

Orientation: 220°

Towers/Radars: 2 radar towers (items 1 and 2)  
and 2 probable radar positions (items 3 and 4)  
are visible, but it cannot be determined  
what radars, if any, are present

Instrumentation/Communications Positions:

None identified

Control Buildings/Revetments: 2 C-shaped  
revetments contain vehicles, but no con-  
trol buildings are present

Support Area: Unsecured area about 1,100  
feet northeast contains approximately 8  
buildings

25X1D

Map: DIA. USATC, Series 200, Sheet 0153-  
8HL, 4th ed, Dec 62 (S)

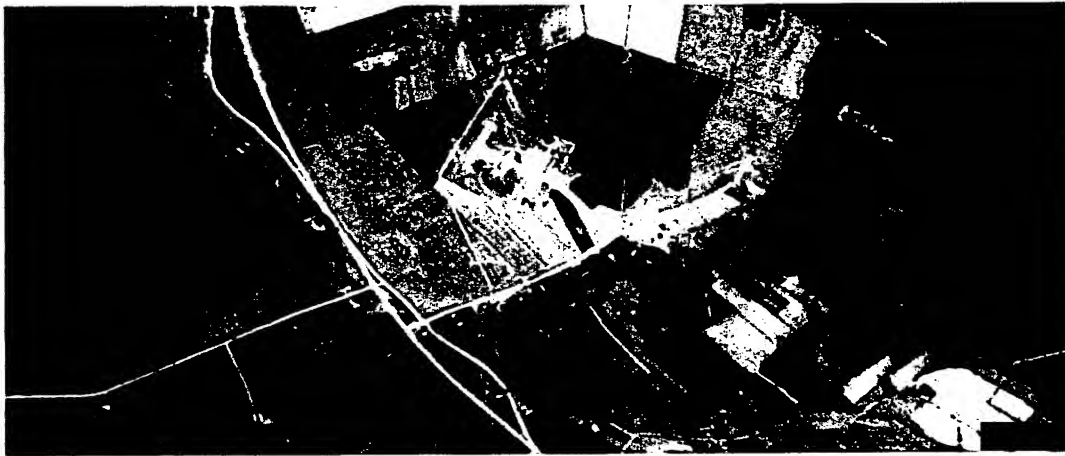
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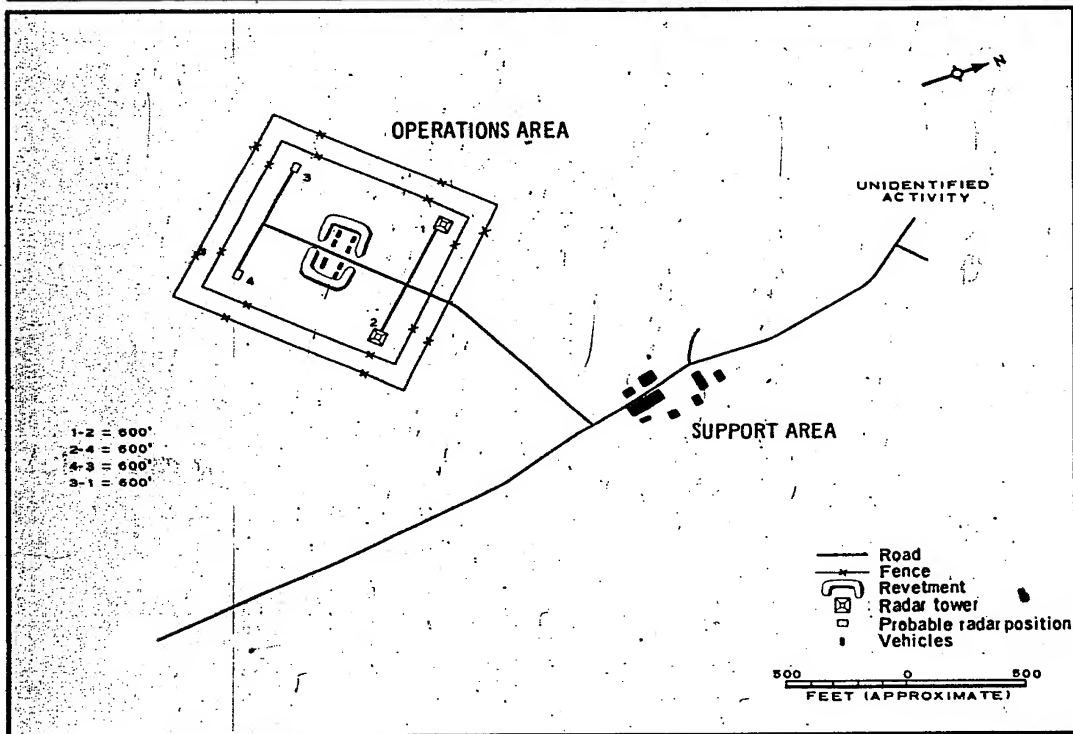


FIGURE 9. VESKITAGUSE RADAR TRACKING FACILITY.

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TYPE: Kamyshin  
LOCATION: KY/YMTC Area

**KAMYSHIN RADAR TRACKING FACILITY**

(See Figure 10)

25X1D

Coordinates: 50-03-00N 45-15-40E

Orientation: [REDACTED]

Mounds/Radars: Of 8 mounds, 7 are occupied as follows--mounds 1 and 2 by probable BACK NET range-and-azimuth radars; mounds 3-6 by possible SIDE NET height-finder radars; mound 7 by an unidentified type of radar.

**Instrumentation/Communications Positions:**

Approximately 4-5 positions (items 9 and 10); there are 2 possible yagi-type antennas at item 9

Control Buildings/Revetments: Single control building situated between mounds 5 and 6; 8 revetments, 7 of which are occupied by vehicles/vans and unidentified objects

Support Area: Partially secured area to the southeast contains about 25 buildings including 9 barracks, several administration types, a heating plant, a generator building, and a small substation; this area is connected to the operations area by cable

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Map: DIA. USATC, Series 200, Sheet 0235-12HL, 3d ed, Jul 64 (S)

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TYPE: Kamyslin  
LOCATION: KY/VNMC Area

**ALEKSANDROV GAY RADAR TRACKING FACILITY**

(See Figure 11)

25X1D

Coordinates: 50-10-00N 48-33-30E

Orientation: 

Mounds/Radars: Of 8 mounds (items 1-8), at least mound 1 is occupied by a probable radar

**Instrumentation/Communications Positions:**

Positions occur at items 9 and 10, but precise occupancy cannot be determined

Control Buildings/Revetments: Single control building situated between mounds 4 and 5; 5 revetments, at least 2 occupied by either vehicles/vans or unidentified objects

Support Area: Secured area about 4,700 feet south-southeast contains at least 16 buildings including 5 barracks, several administration types, and other maintenance/utility types; a cable leads to the operations area

Negation: Not able to be determined on KEYHOLE photography

25X1D

Map: USAF. USATC, Series 200, Sheet 0235-14HL, 1st ed, Dec 61 (S)

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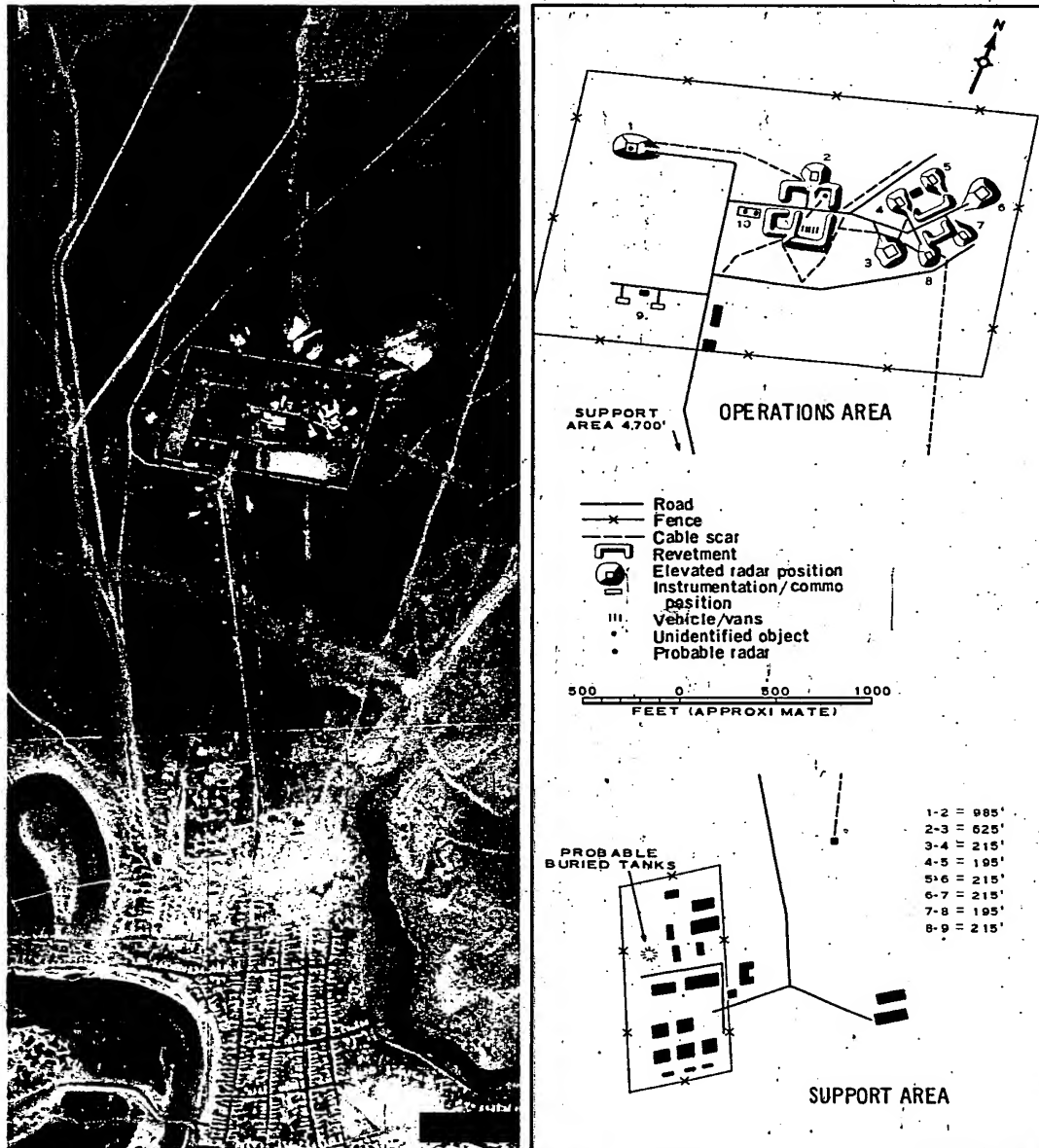


FIGURE 11. ALEKSANDROV GAY RADAR TRACKING FACILITY.

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TYPE: Kamyskin (partial)  
LOCATION: KYVMTC

**INSTRUMENTATION SITE G-1**

(See Figure 12)

Coordinates: 48-25-00N 46-14-40E

Orientation: 335°

Mounds/Radars: 3 mounds (items 1-3), with mound 1 occupied by a probable BAR LOCK and mound 2 by a probable STONE CAKE; in addition, there is a probable radar of unidentified type situated just off mound 3

**Instrumentation/Communications Positions:**

Of 3 probable positions at item 4, 2 appear occupied by unidentified equipment; there is also a large hardstand (item 5) occupied by a number of electronics vans

Control Buildings/Revetments: None observed

Support Area: Undetermined

25X1D

Map: DIA. USATC, Series 200, Sheet 0235-22HL, 4th ed, May 63 (S)

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TYPE: Site 11  
LOCATION: KY/VMTC

**KY/VMTC INSTRUMENTATION SITE 10**

(See Figure 13)

The radar and instrumentation/communications positions at Site 10 (48-57-30N 46-16-00E) do not occur in any readily recognizable pattern. There are 4 slightly raised, unoccupied radar positions (items 1-4), an unoccupied probable radar position (item 5), and an unoccupied mounded position (item 6). There is a concentration of instrumentation/communications positions and equipment in the northeast corner of the site, including probable vans on hardstands (items 7 and 8), 2 positions with unidentified equipment (items 9 and 10), and a control building situated between items 7 and 8. Scattered about the site are other hardstands and possible instrumentation positions, at least 5 buildings, and various vehicles/vans and unidentified equipment/structures. The site has no apparent orientation. It cannot be negated on KEYHOLE photography and was first definitely observed in [REDACTED]

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Map: DIA. USATC, Series 200, Sheet 0235-17HL, 3d ed, Apr 64 (S)

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